FRENCH ARTILLERY OVERVIEW

A TRUE SYSTEM OF SYSTEMS

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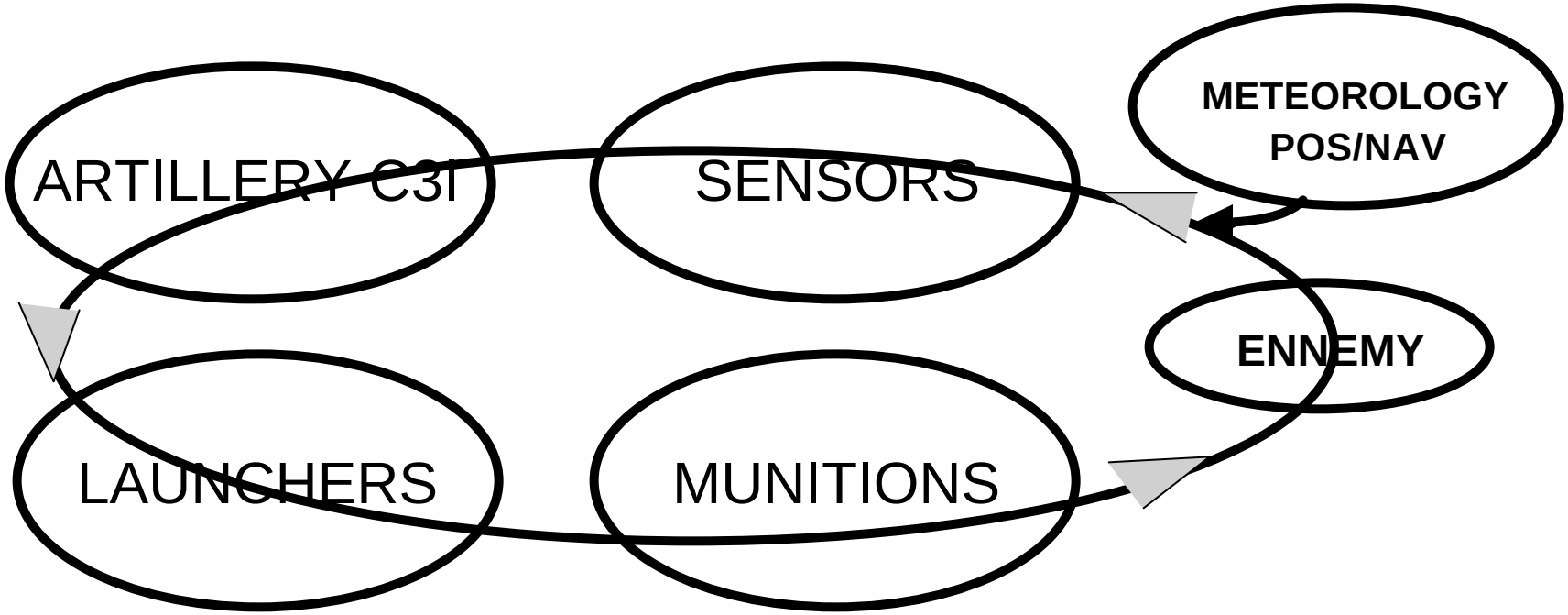
FR FIELD ARTILLERY - BASIC MISSIONS

- **HIGH INTENSITY COMBAT**
  - Achieve accurate and overwhelming terminal effects (close combat support and deep battlefield disruption)
- **PEACE KEEPING MISSIONS**
  - Achieve a range of effects such as deterrence, warning and retaliation

FR FIELD ARTILLERY - MISSION DRIVERS

- TIMELINESS - RESPONSIVENESS
  - Rapid Reaction Firings on Opportunity Targets (vs planned firings)
- FLEXIBILITY
  - Tailor Force Size to suit Circumstances
  - Tailor Terminal Effects - Lethality

THE ARTILLERY LOOP (1/2)



SYSTEM OF SYSTEMS

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THE ARTILLERY LOOP (2/2)

The key factor to give the artillery loop the required qualities :

CONSISTENCY

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OVERVIEW OF FRENCH SYSTEMS (1/9)

COBRA firefinder radar

- Rapid location of enemy guns, rockets and mortars
- Very maneuverable and quick to deploy around the battlefield
- Fully active, two-dimensional beam-steering radar
- FR + UK + GE cooperation managed by OCCAR
- Qualified in 1999
- 10 systems to be delivered : 2001 to 2004

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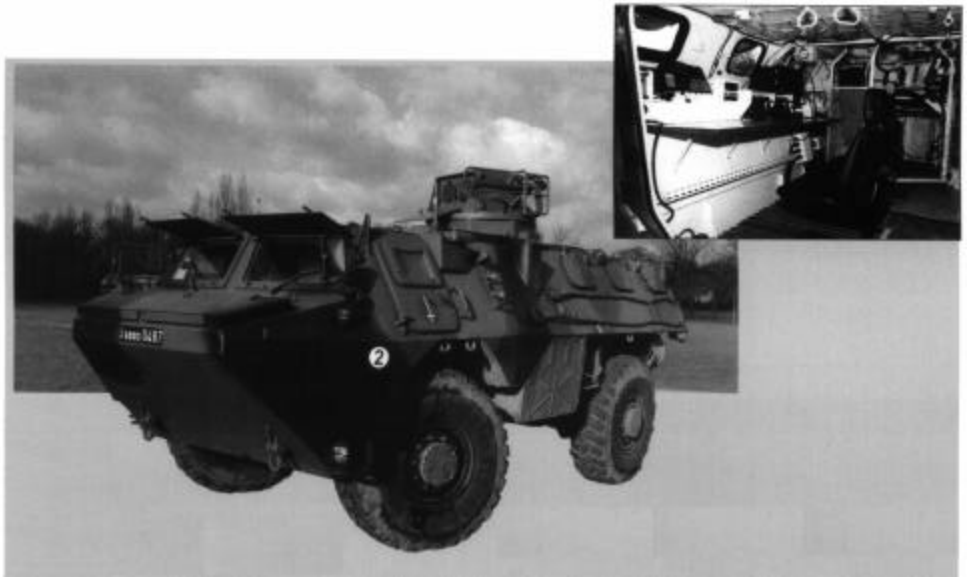
OVERVIEW OF FRENCH SYSTEMS (2/9)

VAB/OBS

Forward Observation Vehicle

- Standard wheeled platform
- Turret with TV and IR cameras, eye-safe laser range finder
- Pos/Nav system + real time data transfer
- Currently in service : 60 units



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OVERVIEW OF FRENCH SYSTEMS (3/9)

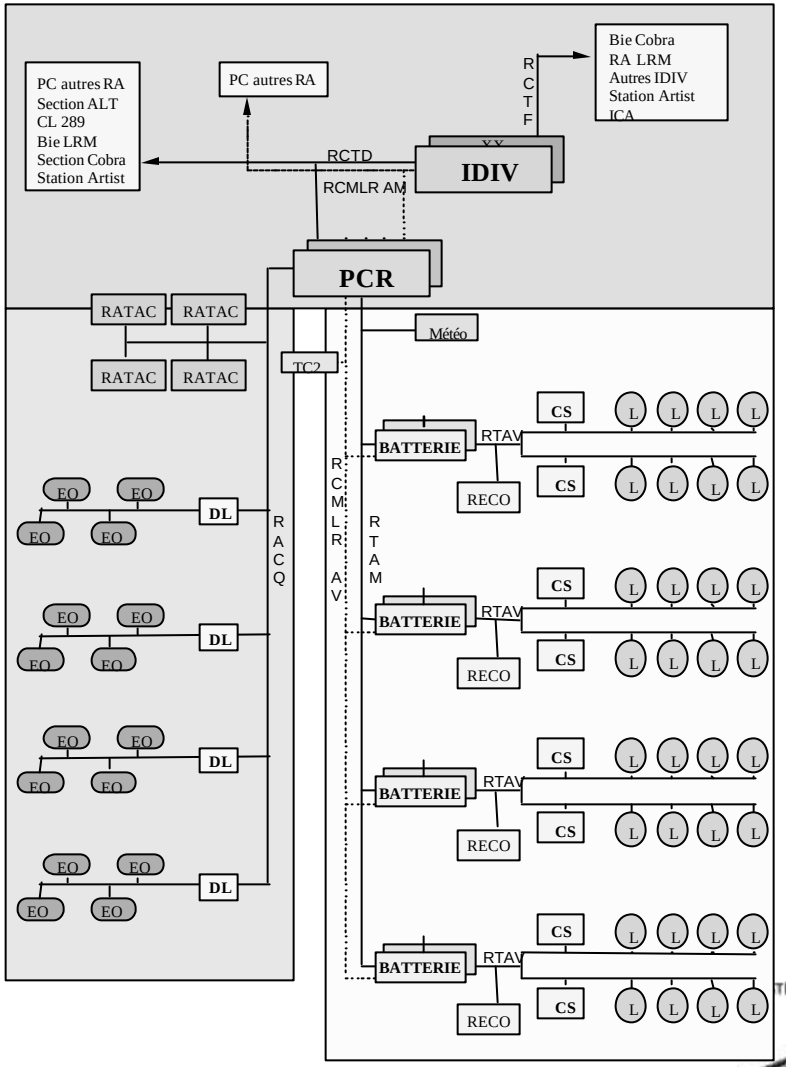
SIROCCO Meteorology system

- Balloon tracking radar
- Automated data processing
- On-going upgrade : add to balloons expendable GPS and PTU sensors equipped with transmitters
- Currently in service

OVERVIEW OF FRENCH SYSTEMS (4/9)

ATLAS/Canon C3I

- Distributed hardware (shelters, terminals, ballistic computers)
- Single modular software
- Embedded firing policy optimization
- Battalion configuration tailoring capability
- Dynamic battlefield network reconfiguration capability
- Currently in development : 1995 - 2001
- 9 systems to be delivered : 2001 - 2004



OVERVIEW OF FRENCH SYSTEMS (5/9)

AUF2 - Self propelled howitzer upgrade

- New 52 Cal. Ordnance
- Modular Charge System
- New autoloader for shell + propellant charge
- Autonomous navigation and ballistic computation
- Automatic fuze setting
- Muzzle velocity radar
- All Artillery functions contained within turret

OVERVIEW OF FRENCH SYSTEMS (6/9)

AUF2 - Self propelled howitzer upgrade (cont.)

- Refurbished chassis
- Improved supportability
- Currently in EMD : 1999 - 2004
- 174 AUF2 units to be produced : 2005 - 2009
- also 94 units of the AUF1 TA configuration to be produced : 2003 - 2007

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OVERVIEW OF FRENCH SYSTEMS (7/9)

155 CAESAR
Truck mounted howitzer

- Air transportable
- High tactical mobility
- Rapid emplacement and displacement
- 52 Cal. Ordnance
- Autonomous navigation and ballistic computation
- Experimental Battery : 2000-2003
- Potential successor to TRF1 Towed Howitzer

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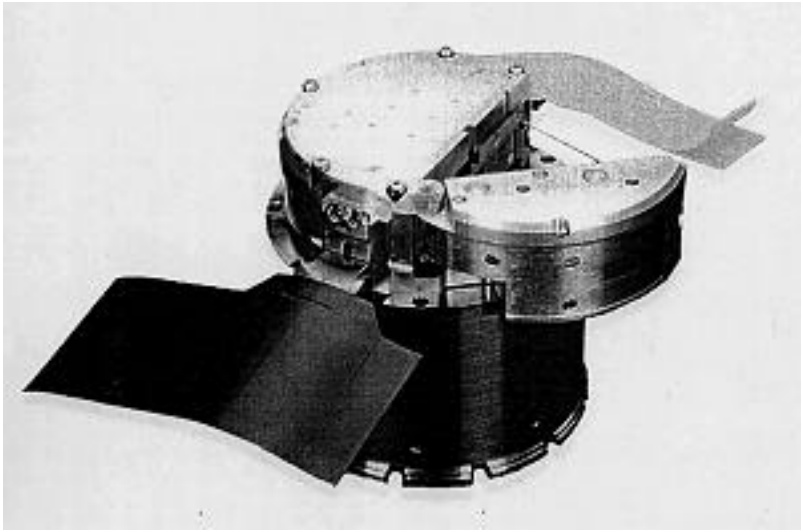
OVERVIEW OF FRENCH SYSTEMS (8/9)

155 BONUS

Sensor-Fuzed shell

- Base-bleed shell with 2 anti-armor sub-munitions
- Each Submunition with IR sensors and EFP warhead
- Qualified in 1999
- FR + SW Co-operation
- Production contract : 2000
- ISD : early 2002



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OVERVIEW OF FRENCH SYSTEMS (9/9)

OTHER 155 MUNITIONS (proven 52 Cal. compatibility)

- 155 OGRE Bomblet shell
  - Currently in production
  - FUSCHIA Chronometrical fuze
- HE 155 LU 211 shell
  - On-going qualification
  - FURALEC F5 Proximity fuze
- SAMPRASS Competent fuze
  - On-going ATD

CONSITENCY AREAS

- Consistency with our allies (JBMOU, ASCA)
- Physical consistency
- Functional consistency
- Combining flexibility and consistency
- Chain of command consistency
- Logistics consistency
- Human factors consistency

KEYS TO CONSISTENCY (1/2)

- **COMMON SENSE**
- **SEARCH FOR SIMPLICITY**
- **HIGH LEVEL FUNCTIONAL APPROACH**

KEYS TO CONSISTENCY (2/2)

TECHNOLOGY

- Encourage cross cultural dialogs
- Use simple and proven technologies
- Emphasise combining and integrating technology
- Use technology to bring costs down
- Good technology is the one the user forgets
- Relieve users from repetitive, physically demanding and time consuming activities

THE ULTIMATE PROOF

French Field Artillery
has the capability of performing

IMMEDIATE FIRING

FSOT (First Salvo On Target)

- since 1980 with limited performance
- since 1990 as standard practice

CONCLUSION

French Field Artillery has been a true System of Systems for the last 20 years

This Trend is carried into the 21st Century

As systems become more sophisticated, they become simpler to the User

He has more time to focus on his most fundamental concerns :

- accomplish his mission
- ensure his survival